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/** ----- Applying the Google Earth data to the susceptibility output -----
/**
/** FILE NAME:      GE_Grids.txt
/** AUTHOR:        RENEE SCHICKER
/** CREATED:       27 JANUARY 2010
/** UPDATED:      10 FEBRUARY 2010
/**
/** The scripts may be supplied in a more readily useable format if the work is acknowledged
/** CONTACT:       Renee_Schicker@hotmail.com
/**
/** SCRIPTS USED:           CheckProgEdit.txt
/**                        def_proj.aml
/**
/** PROCESSES:
/**     SAMPLE_MASK        sample boxes used in Google Earth were compiled in a
/**                        shapefile and are converted to a cover. This is later
/**                        combined with the susceptibility output to define which
/**                        areas are within the sample boxes when summary statistics
/**                        are later conducted.
/**
/**     GT_SAMP_PTS        The point locations determined using Google Earth were
/**                        first converted to a shapefile, and in this process are
/**                        converted to a point feature cover.
/**
/**     Prepare            Prepare the ground-truthed landslide points from the
/**                        previous procedure for analysis by creating polygon features
/**                        from them. The "radius" used to buffer each point is half
/**                        the measured width of the landslide (measured in Google
/**                        Earth using scale bar). The ground-truthed landslide data
/**                        and the sample (box) set data are combined and then split
/**                        into four parts, Auckland, Waikato, North Rotorua, and
/**                        South Rotorua.
/**
/**     UNION              Combine susceptibility output layers from weights of
/**                        evidence combinations with the sample boxes and ground-
/**                        truthed landslides. The same applies for the logistic
/**                        regression model.
/**
/** INPUT:
/**     SHAPEFILES:        My_SubSets          GT_L_Rad_NZMG
/**
/**     COVERS:            Many.
/**
/** *****
workspace D:\renee_gis\output_data\My_GE_Grids

&CALL SAMPLE_MASK
&CALL GT_SAMP_PTS
&RUN D:\renee_gis\scripts\def_proj.aml
&CALL Prepare
&CALL UNION

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&RETURN
/*****

&ROUTINE SAMPLE_MASK
/* Samples_Mask
&IF [EXIST My_SubSets -COVER] &THEN
  &TYPE The coverage My_SubSet exists
&ELSE &DO
  &TYPE The coverage My_SubSets does not exist. Creating now...
  SHAPEARC D:\Renee_GIS\GT_SampSites\Samp_Grids My_SubSets
  BUILD My_SubSets POLY
  &TYPE My_SubSets created
&END

ADDITEM My_SubSets.pat My_SubSets.pat SampleGrid 5 5 I
&RUN d:\renee_gis\scripts\CheckProgEdit.txt
EC My_SubSets
EF POLYGON
SELECT ALL
CALCULATE SampleGrid = 1
SAVE
Q

&RETURN
/*****

&ROUTINE GT_SAMP_PTS
/* Ground-truthed Waikato Landslide sample area points located using Google Earth
&IF [EXIST GT_L_Waikato -COVER] &THEN
  &TYPE The cover GT_L_Waikato exists
&ELSE &DO
  &TYPE The Google Earth ground-truthed Waikato sample site Landslides coverage GT_L_Waikato
  does not exist
  &Type Creating now...
  SHAPEARC D:\Renee_GIS\GT_SampSites\GT_L_Rad_NZMG.shp GT_L_Waikato
&END
&RETURN
/*****

&ROUTINE Prepare
/* make point data into polygons, combine with sample grids, and clip into 1/4s for next stage.
&IF [EXIST GT_L_buff -COVER] &THEN KILL GT_L_buff
&IF [EXIST GT_L_Subsets -COVER] &THEN KILL GT_L_Subsets

BUFFER GT_L_Waikato GT_L_buff Radius_m # # 1 POINT ROUND
ADDITEM GT_L_buff.pat GT_L_buff.pat GT_L_Pres 5 5 I
&RUN d:\renee_gis\scripts\CheckProgEdit.txt
EC GT_L_buff
EF POLYGON
SELECT ALL
CALCULATE GT_L_Pres = 1

```

SAVE

Q

UNION GT\_L\_buff My\_SubSets GT\_L\_Subsets

&IF [EXIST Subsets\_A -COVER] &THEN KILL Subsets\_A  
&IF [EXIST Subsets\_W -COVER] &THEN KILL Subsets\_W  
&IF [EXIST Subsets\_NR -COVER] &THEN KILL Subsets\_NR  
&IF [EXIST Subsets\_SR -COVER] &THEN KILL Subsets\_SR

CLIP GT\_L\_Subsets D:\Renee\_GIS\Valid\_temp\Auckland\_area Subsets\_A  
CLIP GT\_L\_Subsets D:\Renee\_GIS\Valid\_temp\Waikato\_area Subsets\_W  
CLIP GT\_L\_Subsets D:\Renee\_GIS\Valid\_temp\N\_Roto\_area Subsets\_NR  
CLIP GT\_L\_Subsets D:\Renee\_GIS\Valid\_temp\S\_Roto\_area Subsets\_SR

DROPITEM Subsets\_A.PAT Subsets\_A.PAT GT\_L\_BUFF# GT\_L\_BUFF-ID MY\_Subsets-ID MY\_Subsets#  
DROPITEM Subsets\_W.PAT Subsets\_W.PAT GT\_L\_BUFF# GT\_L\_BUFF-ID MY\_Subsets-ID MY\_Subsets#  
DROPITEM Subsets\_NR.PAT Subsets\_NR.PAT GT\_L\_BUFF# GT\_L\_BUFF-ID MY\_Subsets-ID  
MY\_Subsets#  
DROPITEM Subsets\_SR.PAT Subsets\_SR.PAT GT\_L\_BUFF# GT\_L\_BUFF-ID MY\_Subsets-ID  
MY\_Subsets#  
&RETURN

/\*\*\*\*\*

&ROUTINE UNION

/\*&CALL W\_All  
/\*&CALL No\_Aspect  
/\*&CALL No\_Elevation  
/\*&CALL No\_Faults  
/\*&CALL No\_Max\_Rain  
&CALL No\_Av\_Rain  
/\*&CALL No\_Roads  
/\*&CALL No\_Rivers  
/\*&CALL No\_Slope  
/\*&CALL No\_Soil  
/\*&CALL No\_Geol  
/\*&CALL No\_Land\_Cov  
/\*&CALL No\_QMap  
/\*&CALL NO\_Rain  
/\*&CALL NO\_Linear\_Fts  
/\*&CALL No\_Lin\_or\_Rain  
/\*&CALL Signif\_sC  
/\*&CALL Signif\_Wf  
/\*&CALL LOG\_REG\_SET1  
/\*&CALL SASLCMR  
/\*&CALL SASLCSMR  
/\*&CALL SASLCMRG  
/\*&CALL SlxLGA  
&CALL SlxLGF  
/\*&CALL SlxLG

&RETURN

&ROUTINE W\_All

/\* Combine the ground-truthed sample grids and landslides with susceptibility output

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WALLI1 GL\_WALL1

UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WALLI2 GL\_WALL2

UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WALLI3 GL\_WALL3

UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WALLI4 GL\_WALL4

DROPITEM GL\_WALL1.PAT GL\_WALL1.PAT Subsets\_A# Subsets\_A-ID WallLi1-ID WallLi1# A\_W\_All-id

A\_W\_all# Auck\_Li# Auck\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WALL2.PAT GL\_WALL2.PAT Subsets\_w# Subsets\_w-ID WallLi2-ID WallLi2# w\_W\_All-id

w\_W\_all# waik\_Li# waik\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WALL3.PAT GL\_WALL3.PAT Subsets\_nr# Subsets\_nr-ID WallLi3-ID WallLi3# nr\_W\_All-id

NR\_W\_all# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WALL4.PAT GL\_WALL4.PAT Subsets\_sr# Subsets\_sr-ID WallLi4-ID WallLi4# sr\_W\_All-id

SR\_W\_all# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id

&RETURN

&ROUTINE No\_Aspect

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxAspLI1 GL\_WxAsp1

UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxAspLI2 GL\_WxAsp2

UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WxAspLI3 GL\_WxAsp3

UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WxAspLI4 GL\_WxAsp4

DROPITEM GL\_WxAsp1.PAT GL\_WxAsp1.PAT Subsets\_A# Subsets\_A-ID WxAspLI1-ID WxAspLI1#

A\_W\_xAsp-id A\_W\_xAsp# Auck\_Li# Auck\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxAsp2.PAT GL\_WxAsp2.PAT Subsets\_w# Subsets\_w-ID WxAspLI2-ID WxAspLI2#

w\_W\_xAsp-id w\_W\_xAsp# waik\_Li# waik\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxAsp3.PAT GL\_WxAsp3.PAT Subsets\_nr# Subsets\_nr-ID WxAspLI3-ID WxAspLI3#

nr\_W\_xAsp-id NR\_W\_xAsp# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxAsp4.PAT GL\_WxAsp4.PAT Subsets\_sr# Subsets\_sr-ID WxAspLI4-ID WxAspLI4#

sr\_W\_xAsp-id SR\_W\_xAsp# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id

&RETURN

&ROUTINE No\_Elevation

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxElvLI1 GL\_WxElv1

UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxElvLI2 GL\_WxElv2

UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WxElvLI3 GL\_WxElv3

UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WxElvLI4 GL\_WxElv4

DROPITEM GL\_WxElvLI1.PAT GL\_WxElvLI1.PAT Subsets\_A# Subsets\_A-ID WxElvLI1-ID WxElvLI1#

A\_W\_xElv-id A\_W\_xElv# Auck\_Li# Auck\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxElvLI2.PAT GL\_WxElvLI2.PAT Subsets\_w# Subsets\_w-ID WxElvLI2-ID WxElvLI2#

w\_W\_xElv-id w\_W\_xElv# waik\_Li# waik\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxElvLI3.PAT GL\_WxElvLI3.PAT Subsets\_nr# Subsets\_nr-ID WxElvLI3-ID WxElvLI3#

nr\_W\_xElv-id NR\_W\_xElv# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxElvLI4.PAT GL\_WxElvLI4.PAT Subsets\_sr# Subsets\_sr-ID WxElvLI4-ID WxElvLI4#

sr\_W\_xElv-id SR\_W\_xElv# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id

&RETURN

&ROUTINE No\_Faults

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxFltLI1 GL\_WxFlt1

UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxFltLI2 GL\_WxFlt2

```

UNION Subsets_NR D:\Renee_GIS\Valid_temp\WxFtLI3 GL_WxFt3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WxFtLI4 GL_WxFt4
DROPITEM GL_WxFt1.PAT GL_WxFt1.PAT Subsets_A# Subsets_A-ID WxFtLI1-ID WxFtLI1#
A_W_xFt-id A_W_xFt# Auck_Li# Auck_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxFt2.PAT GL_WxFt2.PAT Subsets_w# Subsets_w-ID WxFtLI2-ID WxFtLI2#
w_W_xFt-id w_W_xFt# waik_Li# waik_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxFt3.PAT GL_WxFt3.PAT Subsets_nr# Subsets_nr-ID WxFtLI3-ID WxFtLI3#
nr_W_xFt-id NR_W_xFt# N_Roto_Li# N_Roto_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxFt4.PAT GL_WxFt4.PAT Subsets_sr# Subsets_sr-ID WxFtLI4-ID WxFtLI4#
sr_W_xFt-id SR_W_xFt# S_Roto_Li# S_Roto_li-id radius QMap_Landsl# Qmap_landsl-id
&RETURN

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&ROUTINE No\_Max\_Rain

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UNION Subsets_A D:\Renee_GIS\Valid_temp\WxMxRLI1 GL_WxMxR1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WxMxRLI2 GL_WxMxR2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WxMxRLI3 GL_WxMxR3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WxMxRLI4 GL_WxMxR4
DROPITEM GL_WxMxR1.PAT GL_WxMxR1.PAT Subsets_A# Subsets_A-ID WxMxRLI1-ID WxMxRLI1#
A_W_xMxR-id A_W_xMxR# Auck_Li# Auck_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxMxR2.PAT GL_WxMxR2.PAT Subsets_w# Subsets_w-ID WxMxRLI2-ID WxMxRLI2#
w_W_xMxR-id w_W_xMxR# waik_Li# waik_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxMxR3.PAT GL_WxMxR3.PAT Subsets_nr# Subsets_nr-ID WxMxRLI3-ID WxMxRLI3#
nr_W_xMxR-id NR_W_xMxR# N_Roto_Li# N_Roto_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxMxR4.PAT GL_WxMxR4.PAT Subsets_sr# Subsets_sr-ID WxMxRLI4-ID WxMxRLI4#
sr_W_xMxR-id SR_W_xMxR# S_Roto_Li# S_Roto_li-id radius QMap_Landsl# Qmap_landsl-id
&RETURN

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&ROUTINE No\_Av\_Rain

```

UNION Subsets_A D:\Renee_GIS\Valid_temp\WxAvRLI1 GL_WxAvR1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WxAvRLI2 GL_WxAvR2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WxAvRLI3 GL_WxAvR3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WxAvRLI4 GL_WxAvR4
DROPITEM GL_WxAvR1.PAT GL_WxAvR1.PAT Subsets_A# Subsets_A-ID WxAvRLI1-ID WxAvRLI1#
A_W_xAvR-id A_W_xAvR# Auck_Li# Auck_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxAvR2.PAT GL_WxAvR2.PAT Subsets_w# Subsets_w-ID WxAvRLI2-ID WxAvRLI2#
w_W_xAvR-id w_W_xAvR# waik_Li# waik_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxAvR3.PAT GL_WxAvR3.PAT Subsets_nr# Subsets_nr-ID WxAvRLI3-ID WxAvRLI3#
nr_W_xAvR-id NR_W_xAvR# N_Roto_Li# N_Roto_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxAvR4.PAT GL_WxAvR4.PAT Subsets_sr# Subsets_sr-ID WxAvRLI4-ID WxAvRLI4#
sr_W_xAvR-id SR_W_xAvR# S_Roto_Li# S_Roto_li-id radius QMap_Landsl# Qmap_landsl-id
&RETURN

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&ROUTINE No\_Roads

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UNION Subsets_A D:\Renee_GIS\Valid_temp\WxRdsLI1 GL_WxRds1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WxRdsLI2 GL_WxRds2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WxRdsLI3 GL_WxRds3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WxRdsLI4 GL_WxRds4
DROPITEM GL_WxRds1.PAT GL_WxRds1.PAT Subsets_A# Subsets_A-ID WxRdsLI1-ID WxRdsLI1#
A_W_xRds-id A_W_xRds# Auck_Li# Auck_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WxRds2.PAT GL_WxRds2.PAT Subsets_w# Subsets_w-ID WxRdsLI2-ID WxRdsLI2#
w_W_xRds-id w_W_xRds# waik_Li# waik_li-id radius QMap_Landsl# Qmap_landsl-id

```

DROPITEM GL\_WxRds3.PAT GL\_WxRds3.PAT Subsets\_nr# Subsets\_nr-ID WxRdsLI3-ID WxRdsLI3#  
nr\_W\_xRds-id NR\_W\_xRds# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxRds4.PAT GL\_WxRds4.PAT Subsets\_sr# Subsets\_sr-ID WxRdsLI4-ID WxRdsLI4#  
sr\_W\_xRds-id SR\_W\_xRds# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
&RETURN

&ROUTINE No\_Rivers

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxRivLI1 GL\_WxRiv1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxRivLI2 GL\_WxRiv2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WxRivLI3 GL\_WxRiv3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WxRivLI4 GL\_WxRiv4  
DROPITEM GL\_WxRiv1.PAT GL\_WxRiv1.PAT Subsets\_A# Subsets\_A-ID WxRivLI1-ID WxRivLI1#  
A\_W\_xRiv-id A\_W\_xRiv# Auck\_Li# Auck\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxRiv2.PAT GL\_WxRiv2.PAT Subsets\_w# Subsets\_w-ID WxRivLI2-ID WxRivLI2#  
w\_W\_xRiv-id w\_W\_xRiv# waik\_Li# waik\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxRiv3.PAT GL\_WxRiv3.PAT Subsets\_nr# Subsets\_nr-ID WxRivLI3-ID WxRivLI3#  
nr\_W\_xRiv-id NR\_W\_xRiv# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxRiv4.PAT GL\_WxRiv4.PAT Subsets\_sr# Subsets\_sr-ID WxRivLI4-ID WxRivLI4#  
sr\_W\_xRiv-id SR\_W\_xRiv# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
&RETURN

&ROUTINE No\_Slope

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxSlpLI1 GL\_WxSlp1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxSlpLI2 GL\_WxSlp2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WxSlpLI3 GL\_WxSlp3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WxSlpLI4 GL\_WxSlp4  
DROPITEM GL\_WxSlp1.PAT GL\_WxSlp1.PAT Subsets\_A# Subsets\_A-ID WxSlpLI1-ID WxSlpLI1#  
A\_W\_xSlp-id A\_W\_xSlp# Auck\_Li# Auck\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxSlp2.PAT GL\_WxSlp2.PAT Subsets\_w# Subsets\_w-ID WxSlpLI2-ID WxSlpLI2#  
w\_W\_xSlp-id w\_W\_xSlp# waik\_Li# waik\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxSlp3.PAT GL\_WxSlp3.PAT Subsets\_nr# Subsets\_nr-ID WxSlpLI3-ID WxSlpLI3#  
nr\_W\_xSlp-id NR\_W\_xSlp# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxSlp4.PAT GL\_WxSlp4.PAT Subsets\_sr# Subsets\_sr-ID WxSlpLI4-ID WxSlpLI4#  
sr\_W\_xSlp-id SR\_W\_xSlp# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
&RETURN

&ROUTINE No\_Soil

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxSoilLI1 GL\_WxSoil1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxSoilLI2 GL\_WxSoil2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WxSoilLI3 GL\_WxSoil3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WxSoilLI4 GL\_WxSoil4  
DROPITEM GL\_WxSoil1.PAT GL\_WxSoil1.PAT Subsets\_A# Subsets\_A-ID WxSoilLI1-ID WxSoilLI1#  
A\_W\_xSoil-id A\_W\_xSoil# Auck\_Li# Auck\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxSoil2.PAT GL\_WxSoil2.PAT Subsets\_w# Subsets\_w-ID WxSoilLI2-ID WxSoilLI2#  
w\_W\_xSoil-id w\_W\_xSoil# waik\_Li# waik\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxSoil3.PAT GL\_WxSoil3.PAT Subsets\_nr# Subsets\_nr-ID WxSoilLI3-ID WxSoilLI3#  
nr\_W\_xSoil-id NR\_W\_xSoil# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
DROPITEM GL\_WxSoil4.PAT GL\_WxSoil4.PAT Subsets\_sr# Subsets\_sr-ID WxSoilLI4-ID WxSoilLI4#  
sr\_W\_xSoil-id SR\_W\_xSoil# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
&RETURN

&ROUTINE No\_Geol

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxGeolLI1 GL\_WxGeol1

UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxGeolLI2 GL\_WxGeol2

UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WxGeolLI3 GL\_WxGeol3

UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WxGeolLI4 GL\_WxGeol4

DROPITEM GL\_WxGeol1.PAT GL\_WxGeol1.PAT Subsets\_A# Subsets\_A-ID WxGeolLI1-ID WxGeolLI1#  
A\_W\_xGeol-id A\_W\_xGeol# Auck\_Li# Auck\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxGeol2.PAT GL\_WxGeol2.PAT Subsets\_w# Subsets\_w-ID WxGeolLI2-ID WxGeolLI2#  
w\_W\_xGeol-id w\_W\_xGeol# waik\_Li# waik\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxGeol3.PAT GL\_WxGeol3.PAT Subsets\_nr# Subsets\_nr-ID WxGeolLI3-ID  
WxGeolLI3# nr\_W\_xGeol-id NR\_W\_xGeol# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl#  
Qmap\_landsl-id

DROPITEM GL\_WxGeol4.PAT GL\_WxGeol4.PAT Subsets\_sr# Subsets\_sr-ID WxGeolLI4-ID WxGeolLI4#  
sr\_W\_xGeol-id SR\_W\_xGeol# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl# Qmap\_landsl-id  
&RETURN

&ROUTINE No\_Land\_Cov

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxLndULI1 GL\_WxLndU1

UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxLndULI2 GL\_WxLndU2

UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WxLndULI3 GL\_WxLndU3

UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WxLndULI4 GL\_WxLndU4

DROPITEM GL\_WxLndU1.PAT GL\_WxLndU1.PAT Subsets\_A# Subsets\_A-ID WxLndULI1-ID  
WxLndULI1# A\_W\_xLndU-id A\_W\_xLndU# Auck\_Li# Auck\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxLndU2.PAT GL\_WxLndU2.PAT Subsets\_w# Subsets\_w-ID WxLndULI2-ID  
WxLndULI2# w\_W\_xLndU-id w\_W\_xLndU# waik\_Li# waik\_li-id radius QMap\_Landsl# Qmap\_landsl-id

DROPITEM GL\_WxLndU3.PAT GL\_WxLndU3.PAT Subsets\_nr# Subsets\_nr-ID WxLndULI3-ID  
WxLndULI3# nr\_W\_xLndU-id NR\_W\_xLndU# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl#  
Qmap\_landsl-id

DROPITEM GL\_WxLndU4.PAT GL\_WxLndU4.PAT Subsets\_sr# Subsets\_sr-ID WxLndULI4-ID  
WxLndULI4# sr\_W\_xLndU-id SR\_W\_xLndU# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl#  
Qmap\_landsl-id

&RETURN

&ROUTINE No\_QMap

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WxQMapLI1 GL\_WxQMap1

UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WxQMapLI2 GL\_WxQMap2

UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WxQMapLI3 GL\_WxQMap3

UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WxQMapLI4 GL\_WxQMap4

DROPITEM GL\_WxQMap1.PAT GL\_WxQMap1.PAT Subsets\_A# Subsets\_A-ID WxQMapLI1-ID  
WxQMapLI1# A\_W\_xQMap-id A\_W\_xQMap# Auck\_Li# Auck\_li-id radius QMap\_Landsl#  
Qmap\_landsl-id

DROPITEM GL\_WxQMap2.PAT GL\_WxQMap2.PAT Subsets\_w# Subsets\_w-ID WxQMapLI2-ID  
WxQMapLI2# w\_W\_xQMap-id w\_W\_xQMapU# waik\_Li# waik\_li-id radius QMap\_Landsl#  
Qmap\_landsl-id

DROPITEM GL\_WxQMap3.PAT GL\_WxQMap3.PAT Subsets\_nr# Subsets\_nr-ID WxQMapLI3-ID  
WxQMapLI3# nr\_W\_xQMap-id NR\_W\_xQMap# N\_Roto\_Li# N\_Roto\_li-id radius QMap\_Landsl#  
Qmap\_landsl-id

DROPITEM GL\_WxQMap4.PAT GL\_WxQMap4.PAT Subsets\_sr# Subsets\_sr-ID WxQMapLI4-ID  
WxQMapLI4# sr\_W\_xQMap-id SR\_W\_xQMap# S\_Roto\_Li# S\_Roto\_li-id radius QMap\_Landsl#  
Qmap\_landsl-id

&RETURN

&ROUTINE NO\_Rain

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WxRainLI1 GL_WxRain1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WxRainLI2 GL_WxRain2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WxRainLI3 GL_WxRain3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WxRainLI4 GL_WxRain4
DROPITEM GL_WxRain1.PAT GL_WxRain1.PAT Subsets_A# Subsets_A-ID WxRainLI1-ID WxRainLI1#
A_W_xRain-id A_W_xRain# Auck_Li# Auck_li-id radius Rain_Landsl# Rain_landsl-id
DROPITEM GL_WxRain2.PAT GL_WxRain2.PAT Subsets_w# Subsets_w-ID WxRainLI2-ID WxRainLI2#
w_W_xRain-id w_W_xRain# waik_Li# waik_li-id radius Rain_Landsl# Rain_landsl-id
DROPITEM GL_WxRain3.PAT GL_WxRain3.PAT Subsets_nr# Subsets_nr-ID WxRainLI3-ID WxRainLI3#
nr_W_xRain-id NR_W_xRain# N_Roto_Li# N_Roto_li-id radius Rain_Landsl# Rain_landsl-id
DROPITEM GL_WxRain4.PAT GL_WxRain4.PAT Subsets_sr# Subsets_sr-ID WxRainLI4-ID WxRainLI4#
sr_W_xRain-id SR_W_xRain# S_Roto_Li# S_Roto_li-id radius Rain_Landsl# Rain_landsl-id
&RETURN
```

&ROUTINE NO\_Linear\_Fts

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WxLinLI1 GL_WxLin1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WxLinLI2 GL_WxLin2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WxLinLI3 GL_WxLin3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WxLinLI4 GL_WxLin4
DROPITEM GL_WxLin1.PAT GL_WxLin1.PAT Subsets_A# Subsets_A-ID WxLinLI1-ID WxLinLI1#
A_W_xLin-id A_W_xLin# Auck_Li# Auck_li-id radius Lin_Landsl# Lin_landsl-id
DROPITEM GL_WxLin2.PAT GL_WxLin2.PAT Subsets_w# Subsets_w-ID WxLinLI2-ID WxLinLI2#
w_W_xLin-id w_W_xLin# waik_Li# waik_li-id radius Lin_Landsl# Lin_landsl-id
DROPITEM GL_WxLin3.PAT GL_WxLin3.PAT Subsets_nr# Subsets_nr-ID WxLinLI3-ID WxLinLI3#
nr_W_xLin-id NR_W_xLin# N_Roto_Li# N_Roto_li-id radius Lin_Landsl# Lin_landsl-id
DROPITEM GL_WxLin4.PAT GL_WxLin4.PAT Subsets_sr# Subsets_sr-ID WxLinLI4-ID WxLinLI4#
sr_W_xLin-id SR_W_xLin# S_Roto_Li# S_Roto_li-id radius Lin_Landsl# Lin_landsl-id
&RETURN
```

&ROUTINE No\_Lin\_or\_Rain

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WxLinRnLI1 GL_WxLinRn1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WxLinRnLI2 GL_WxLinRn2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WxLinRnLI3 GL_WxLinRn3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WxLinRnLI4 GL_WxLinRn4
DROPITEM GL_WxLinRn1.PAT GL_WxLinRn1.PAT Subsets_A# Subsets_A-ID WxLinRnLI1-ID
WxLinRnLI1# A_W_xLinRn-id A_W_xLinRn# Auck_Li# Auck_li-id radius LinRn_Landsl# LinRn_landsl-id
DROPITEM GL_WxLinRn2.PAT GL_WxLinRn2.PAT Subsets_w# Subsets_w-ID WxLinRnLI2-ID
WxLinRnLI2# w_W_xLinRn-id w_W_xLinRn# waik_Li# waik_li-id radius LinRn_Landsl# LinRn_landsl-id
DROPITEM GL_WxLinRn3.PAT GL_WxLinRn3.PAT Subsets_nr# Subsets_nr-ID WxLinRnLI3-ID
WxLinRnLI3# nr_W_xLinRn-id NR_W_xLinRn# N_Roto_Li# N_Roto_li-id radius LinRn_Landsl#
LinRn_landsl-id
DROPITEM GL_WxLinRn4.PAT GL_WxLinRn4.PAT Subsets_sr# Subsets_sr-ID WxLinRnLI4-ID
WxLinRnLI4# sr_W_xLinRn-id SR_W_xLinRn# S_Roto_Li# S_Roto_li-id radius LinRn_Landsl#
LinRn_landsl-id
&RETURN
```

&ROUTINE

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSArLuGLI1 GL_WSArLuG1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSArLuGLI2 GL_WSArLuG2
```



UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WSArLuGLI3 GL\_WSArLuG3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WSArLuGLI4 GL\_WSArLuG4  
&RETURN

&ROUTINE

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WSAXLGEFVLI1 GL\_WSAXLGEFV1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WSAXLGEFVLI2 GL\_WSAXLGEFV2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WSAXLGEFVLI3 GL\_WSAXLGEFV3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WSAXLGEFVLI4 GL\_WSAXLGEFV4  
&RETURN

&ROUTINE

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WSAXLGEVLI1 GL\_WSAXLGEV1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WSAXLGEVLI2 GL\_WSAXLGEV2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WSAXLGEVLI3 GL\_WSAXLGEV3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WSAXLGEVLI4 GL\_WSAXLGEV4  
&RETURN

&ROUTINE

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WSAXLGFVLI1 GL\_WSAXLGFV1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WSAXLGFVLI2 GL\_WSAXLGFV2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WSAXLGFVLI3 GL\_WSAXLGFV3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WSAXLGFVLI4 GL\_WSAXLGFV4  
&RETURN

&ROUTINE

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WSAXLGEFLI1 GL\_WSAXLGEF1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WSAXLGEFLI2 GL\_WSAXLGEF2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WSAXLGEFLI3 GL\_WSAXLGEF3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WSAXLGEFLI4 GL\_WSAXLGEF4  
&RETURN

&ROUTINE

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WSAXLGFLI1 GL\_WSAXLGF1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WSAXLGFLI2 GL\_WSAXLGF2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WSAXLGFLI3 GL\_WSAXLGF3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WSAXLGFLI4 GL\_WSAXLGF4  
&RETURN

&ROUTINE

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WSAXLGELI1 GL\_WSAXLGE1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WSAXLGELI2 GL\_WSAXLGE2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WSAXLGELI3 GL\_WSAXLGE3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WSAXLGELI4 GL\_WSAXLGE4  
&RETURN

&ROUTINE

UNION Subsets\_A D:\Renee\_GIS\Valid\_temp\WSAXLGVLI1 GL\_WSAXLGV1  
UNION Subsets\_W D:\Renee\_GIS\Valid\_temp\WSAXLGVLI2 GL\_WSAXLGV2  
UNION Subsets\_NR D:\Renee\_GIS\Valid\_temp\WSAXLGVLI3 GL\_WSAXLGV3  
UNION Subsets\_SR D:\Renee\_GIS\Valid\_temp\WSAXLGVLI4 GL\_WSAXLGV4

&RETURN

&ROUTINE Signif\_sC

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSEALG_sCLI1 GL_SEALG_sC1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSEALG_sCLI2 GL_SEALG_sC2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WSEALG_sCLI3 GL_SEALG_sC3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WSEALG_sCLI4 GL_SEALG_sC4
DROPITEM GL_SEALG_sC1.PAT GL_SEALG_sC1.PAT Subsets_A# Subsets_A-ID WSEALG_sCLI1-ID
WSEALG_sCLI1# A_SEALG_sC-id A_SEALG_sC# Auck_Li# Auck_li-id radius
DROPITEM GL_SEALG_sC2.PAT GL_SEALG_sC2.PAT Subsets_w# Subsets_w-ID WSEALG_sCLI2-ID
WSEALG_sCLI2# w_SEALG_sC-id w_SEALG_sC# waik_Li# waik_li-id radius
DROPITEM GL_SEALG_sC3.PAT GL_SEALG_sC3.PAT Subsets_nr# Subsets_nr-ID WSEALG_sCLI3-ID
WSEALG_sCLI3# nr_SEALG_sC-id NR_SEALG_sC# N_Roto_Li# N_Roto_li-id radius
DROPITEM GL_SEALG_sC4.PAT GL_SEALG_sC4.PAT Subsets_sr# Subsets_sr-ID WSEALG_sCLI4-ID
WSEALG_sCLI4# sr_SEALG_sC-id SR_SEALG_sC# S_Roto_Li# S_Roto_li-id radius
&RETURN
```

&ROUTINE Signif\_Wf

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSIEAsLCGLI1 GL_SIEAsLCG1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSIEAsLCGLI2 GL_SIEAsLCG2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WSIEAsLCGLI3 GL_SIEAsLCG3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WSIEAsLCGLI4 GL_SIEAsLCG4
DROPITEM GL_SIEAsLCG1.PAT GL_SIEAsLCG1.PAT Subsets_A# Subsets_A-ID WSIEAsLCGLI1-ID
WSIEAsLCGLI1# A_SIEAsLCG-id A_SIEAsLCG# Auck_Li# Auck_li-id radius
DROPITEM GL_SIEAsLCG2.PAT GL_SIEAsLCG2.PAT Subsets_w# Subsets_w-ID WSIEAsLCGLI2-ID
WSIEAsLCGLI2# w_SIEAsLCG-id w_SIEAsLCG# waik_Li# waik_li-id radius
DROPITEM GL_SIEAsLCG3.PAT GL_SIEAsLCG3.PAT Subsets_nr# Subsets_nr-ID WSIEAsLCGLI3-ID
WSIEAsLCGLI3# nr_SIEAsLCG-id NR_SIEAsLCG# N_Roto_Li# N_Roto_li-id radius
DROPITEM GL_SIEAsLCG4.PAT GL_SIEAsLCG4.PAT Subsets_sr# Subsets_sr-ID WSIEAsLCGLI4-ID
WSIEAsLCGLI4# sr_SIEAsLCG-id SR_SIEAsLCG# S_Roto_Li# S_Roto_li-id radius
&RETURN
```

&ROUTINE SALCSMR

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSALCSMRI1 GL_WSALCSMR1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSALCSMRI2 GL_WSALCSMR2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WSALCSMRI3 GL_WSALCSMR3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WSALCSMRI4 GL_WSALCSMR4
DROPITEM GL_WSALCSMR1.PAT GL_WSALCSMR1.PAT Subsets_A# Subsets_A-ID WSALCSMRI1-ID
WSALCSMRI1# A_SALCSMR-id A_SALCSMR# Auck_Li# Auck_li-id radius QMap_Landsl#
Qmap_landsl-id
DROPITEM GL_WSALCSMR2.PAT GL_WSALCSMR2.PAT Subsets_w# Subsets_w-ID WSALCSMRI2-ID
WSALCSMRI2# w_SALCSMR-id w_SALCSMR# waik_Li# waik_li-id radius QMap_Landsl#
Qmap_landsl-id
DROPITEM GL_WSALCSMR3.PAT GL_WSALCSMR3.PAT Subsets_nr# Subsets_nr-ID WSALCSMRI3-ID
WSALCSMRI3# nr_SALCSMR-id NR_SALCSMR# N_Roto_Li# N_Roto_li-id radius QMap_Landsl#
Qmap_landsl-id
DROPITEM GL_WSALCSMR4.PAT GL_WSALCSMR4.PAT Subsets_sr# Subsets_sr-ID WSALCSMRI4-ID
WSALCSMRI4# sr_SALCSMR-id SR_SALCSMR# S_Roto_Li# S_Roto_li-id radius QMap_Landsl#
Qmap_landsl-id
&RETURN
```

&ROUTINE SALCMR

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSALCMRLI1 GL_WSALCMR1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSALCMRLI2 GL_WSALCMR2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WSALCMRLI3 GL_WSALCMR3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WSALCMRLI4 GL_WSALCMR4
DROPITEM GL_WSALCMR1.PAT GL_WSALCMR1.PAT Subsets_A# Subsets_A-ID WSALCMRLI1-ID
WSALCMRLI1# A_SALCMR-id A_SALCMR# Auck_Li# Auck_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WSALCMR2.PAT GL_WSALCMR2.PAT Subsets_w# Subsets_w-ID WSALCMRLI2-ID
WSALCMRLI2# w_SALCMR-id w_SALCMR# waik_Li# waik_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_WSALCMR3.PAT GL_WSALCMR3.PAT Subsets_nr# Subsets_nr-ID WSALCMRLI3-ID
WSALCMRLI3# nr_SALCMR-id NR_SALCMR# N_Roto_Li# N_Roto_li-id radius QMap_Landsl#
Qmap_landsl-id
DROPITEM GL_WSALCMR4.PAT GL_WSALCMR4.PAT Subsets_sr# Subsets_sr-ID WSALCMRLI4-ID
WSALCMRLI4# sr_SALCMR-id SR_SALCMR# S_Roto_Li# S_Roto_li-id radius QMap_Landsl#
Qmap_landsl-id
&RETURN
```

&ROUTINE SALCMRG

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSALCMRGLI1 GL_WSALCMRG1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSALCMRGLI2 GL_WSALCMRG2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WSALCMRGLI3 GL_WSALCMRG3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WSALCMRGLI4 GL_WSALCMRG4
DROPITEM GL_WSALCMRG1.PAT GL_WSALCMRG1.PAT Subsets_A# Subsets_A-ID WSALCMRGLI1-ID
WSALCMRGLI1# A_SALCMRG-id A_SALCMRG# Auck_Li# Auck_li-id radius QMap_Landsl#
Qmap_landsl-id
DROPITEM GL_WSALCMRG2.PAT GL_WSALCMRG2.PAT Subsets_w# Subsets_w-ID WSALCMRGLI2-ID
WSALCMRGLI2# w_SALCMRG-id w_SALCMRG# waik_Li# waik_li-id radius QMap_Landsl#
Qmap_landsl-id
DROPITEM GL_WSALCMRG3.PAT GL_WSALCMRG3.PAT Subsets_nr# Subsets_nr-ID WSALCMRGLI3-ID
WSALCMRGLI3# nr_SALCMRG-id NR_SALCMRG# N_Roto_Li# N_Roto_li-id radius QMap_Landsl#
Qmap_landsl-id
DROPITEM GL_WSALCMRG4.PAT GL_WSALCMRG4.PAT Subsets_sr# Subsets_sr-ID WSALCMRGLI4-ID
WSALCMRGLI4# sr_SALCMRG-id SR_SALCMRG# S_Roto_Li# S_Roto_li-id radius QMap_Landsl#
Qmap_landsl-id
&RETURN
```

&ROUTINE SlxLGA

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSlxlGALI1 GL_WSlxlGA1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSlxlGALI2 GL_WSlxlGA2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WSlxlGALI3 GL_WSlxlGA3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WSlxlGALI4 GL_WSlxlGA4
DROPITEM GL_WSlxlGA1.PAT GL_WSlxlGA1.PAT Subsets_A# Subsets_A-ID WSlxlGALI1-ID
WSlxlGALI1# A_SlxlGA-id A_SlxlGA#
DROPITEM GL_WSlxlGA2.PAT GL_WSlxlGA2.PAT Subsets_w# Subsets_w-ID WSlxlGALI2-ID
WSlxlGALI2# w_SlxlGA-id w_SlxlGA#
DROPITEM GL_WSlxlGA3.PAT GL_WSlxlGA3.PAT Subsets_nr# Subsets_nr-ID WSlxlGALI3-ID
WSlxlGALI3# nr_SlxlGA-id NR_SlxlGA#
DROPITEM GL_WSlxlGA4.PAT GL_WSlxlGA4.PAT Subsets_sr# Subsets_sr-ID WSlxlGALI4-ID
WSlxlGALI4# sr_SlxlGA-id SR_SlxlGA#
&RETURN
```

&ROUTINE SlxLGF

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSlxLGFLI1 GL_WSlxLGF1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSlxLGFLI2 GL_WSlxLGF2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WSlxLGFLI3 GL_WSlxLGF3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WSlxLGFLI4 GL_WSlxLGF4
DROPITEM GL_WSlxLGF1.PAT GL_WSlxLGF1.PAT Subsets_A# Subsets_A-ID WSlxLGFLI1-ID
WSlxLGFLI1# A_SlxLGF-id A_SlxLGF#
DROPITEM GL_WSlxLGF2.PAT GL_WSlxLGF2.PAT Subsets_w# Subsets_w-ID WSlxLGFLI2-ID
WSlxLGFLI2# w_SlxLGF-id w_SlxLGF#
DROPITEM GL_WSlxLGF3.PAT GL_WSlxLGF3.PAT Subsets_nr# Subsets_nr-ID WSlxLGFLI3-ID
WSlxLGFLI3# nr_SlxLGF-id NR_SlxLGF#
DROPITEM GL_WSlxLGF4.PAT GL_WSlxLGF4.PAT Subsets_sr# Subsets_sr-ID WSlxLGFLI4-ID
WSlxLGFLI4# sr_SlxLGF-id SR_SlxLGF#
&RETURN
```

&ROUTINE SlxLG

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\WSlxLGLI1 GL_WSlxLG1
UNION Subsets_W D:\Renee_GIS\Valid_temp\WSlxLGLI2 GL_WSlxLG2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\WSlxLGLI3 GL_WSlxLG3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\WSlxLGLI4 GL_WSlxLG4
DROPITEM GL_WSlxLG1.PAT GL_WSlxLG1.PAT Subsets_A# Subsets_A-ID WSlxLGLI1-ID WSlxLGLI1#
A_SlxLG-id A_SlxLG#
DROPITEM GL_WSlxLG2.PAT GL_WSlxLG2.PAT Subsets_w# Subsets_w-ID WSlxLGLI2-ID WSlxLGLI2#
w_SlxLG-id w_SlxLG#
DROPITEM GL_WSlxLG3.PAT GL_WSlxLG3.PAT Subsets_nr# Subsets_nr-ID WSlxLGLI3-ID WSlxLGLI3#
nr_SlxLG-id NR_SlxLG#
DROPITEM GL_WSlxLG4.PAT GL_WSlxLG4.PAT Subsets_sr# Subsets_sr-ID WSlxLGLI4-ID WSlxLGLI4#
sr_SlxLG-id SR_SlxLG#
&RETURN
```

&ROUTINE LOG\_REG\_SET1

```
UNION Subsets_A D:\Renee_GIS\Valid_temp\LR_S1E2_LI1 GL_LR_S1E2_1
UNION Subsets_W D:\Renee_GIS\Valid_temp\LR_S1E2_LI2 GL_LR_S1E2_2
UNION Subsets_NR D:\Renee_GIS\Valid_temp\LR_S1E2_LI3 GL_LR_S1E2_3
UNION Subsets_SR D:\Renee_GIS\Valid_temp\LR_S1E2_LI4 GL_LR_S1E2_4
DROPITEM GL_LR_S1E2_1.PAT GL_LR_S1E2_1.PAT Subsets_A# Subsets_A-ID LR_S1E2_LI1-ID
LR_S1E2_LI1# A_LR_S1E2-id A_LR_S1E2# Auck_Li# Auck_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_LR_S1E2_2.PAT GL_LR_S1E2_2.PAT Subsets_w# Subsets_w-ID LR_S1E2_LI2-ID
LR_S1E2_LI2# w_LR_S1E2-id w_LR_S1E2# waik_Li# waik_li-id radius QMap_Landsl# Qmap_landsl-id
DROPITEM GL_LR_S1E2_3.PAT GL_LR_S1E2_3.PAT Subsets_nr# Subsets_nr-ID LR_S1E2_LI3-ID
LR_S1E2_LI3# nr_LR_S1E2-id NR_LR_S1E2# N_Roto_Li# N_Roto_li-id radius QMap_Landsl#
Qmap_landsl-id
DROPITEM GL_LR_S1E2_4.PAT GL_LR_S1E2_4.PAT Subsets_sr# Subsets_sr-ID LR_S1E2_LI4-ID
LR_S1E2_LI4# sr_LR_S1E2-id SR_LR_S1E2# S_Roto_Li# S_Roto_li-id radius QMap_Landsl#
Qmap_landsl-id
&RETURN
```